Gun Violence as an Adverse Childhood Experience: Reflections from Research and Practice Perspectives

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Adverse Childhood Experiences

- ACEs persist as a public health challenge in the United States
  - Nearly two-thirds of adults in the U.S. (62%) report at least one ACE

- Most of the scientific literature conceptualizes ACEs as “stressful or traumatic events that impact the healthy development of children through adolescence and into adulthood”.

- Research on ACEs has typically focused on child maltreatment, sexual abuse, household mental illness, and family members who have been incarcerated.

- ACEs now are understood to include a range of events, including youth experiences with bullying, experience with the juvenile justice system, and parental absence.

- Many people report experiencing multiple ACEs.

References: SAMHSA, 2018; Forster, et al., 2017; Wade, et al., 2014; Merrick et al., 2018; Blodgett & Lanigan, 2018; Garrido, et al., 2018
ACEs Connection accelerates the global movement to prevent and heal adverse childhood experiences (ACEs), and supports communities to work collaboratively to solve our most intractable problems. Left unaddressed, toxic stress from ACEs harms children and families, organizations, systems and communities, and reduces the ability of individuals and entities to respond to stressful events with resiliency. The ACEs in these three realms intertwine throughout people’s lives, and affect the viability of organizations, systems and communities.

1. **Household**
   - Divorce
   - Incarcerated family member
   - Physical and emotional neglect
   - Domestic violence
   - Substance abuse
   - Emotional and sexual abuse

2. **Community**
   - Substandard schools
   - Structural racism
   - Violence
   - Poverty
   - Lack of jobs
   - Poor housing quality and affordability

3. **Environment**
   - Climate crisis
     - Record heat & droughts
     - Wildfires & smoke
     - Record storms, flooding & mudslides
     - Sea level rise
   - Natural disasters
     - Tornadoes & hurricanes
     - Volcano eruptions & tsunamis
     - Earthquakes

Thanks to Building Community Resilience Collaborative and Networks and the International Transformational Resilience Coalition for inspiration and guidance. Please visit ACEsConnection.com to learn more about the science of ACEs and join the movement to prevent ACEs, heal trauma and build resilience.
Adverse Childhood Experiences

Centers for Disease Control and Prevention, 2018; Image Source: https://childsavers.org/trauma/trauma-triangle_aces/
Current ACE Screening/Referral Practices

- ACE screenings predominately take place in clinical settings.
- These screenings typically lead to referrals (for example, to a social worker or a grief counseling program).
  - However, the ability to make such referrals is contingent upon a community’s resources and an individual’s access to such interventions.
  - While there are many evidence-based interventions available that address a wide-ranging number of the health issues linked to ACEs, most are not readily available to the communities who need them most.

ACE Screening (continued)

- Although the nature of the ACEs captured via current screening tools varies, typically they include the following categories of experiences:
  - *Child maltreatment (including verbal abuse, physical abuse, sexual abuse, and/or neglect)*
  - *Meeting of basic needs (or inability thereof)*
  - *Residential instability*
  - *Divorced parents*
  - *Death of a primary caregiver*
  - *Family member engaging in substance use*
  - *Family member with poor mental health*
  - *Incarcerated family member*
Prevalence of ACEs

• ACEs persist across the U.S.
  • Approximately 45% of children in the U.S. have experienced at least one ACE
  • Nationally, over one-third of children ages 0-5 report experiencing at least one ACE
  • And among middle- and high-school aged students, at nearly 30% report experiencing at least 2 ACEs.
  • Black children, in particular, are disproportionately impacted
    • Over 6/10 Black children report having ACEs compared to 4/10 White children

• Some research suggests that ACEs disproportionately impact in urban areas. For example:
  • Among a sample of adults in Philadelphia:
    • 33.2% reported experiencing emotional abuse during childhood
    • 40.5% reported witnessing violence while growing up
    • 34.5% reported experiencing discrimination based on their race or ethnicity

Is COVID-19 an adverse childhood experience (ACE): Implications for screening for primary care

Lee M. Sanders, MD, MPH

DOI: https://doi.org/10.1016/j.jpeds.2020.05.064
ACEs and COVID-19

- ACEs during the COVID-19 pandemic have been amplified
  - Job loss and increased economic instability
  - Increased housing instability
  - Increased illness and death among families
  - School closures have resulted in increased instability for families and children
  - Heightened police brutality
  - There has been an observed uptick in other forms of gun violence as well

Gun Violence Exposure

• Gun violence is a persistent public health issue in the US.
  ◦ Each year, approximately 100,000 American are injured with a firearm, with over 17,000 of these individuals being children (ages 0-18 years).
  ◦ Thirty-eight thousand of these individuals die as a result of their firearm injuries.

• However, these statistics don’t reflect the broader spectrum of gun violence experiences and exposure.
  ◦ (e.g. witnessing gunfire, hearing gunshots, and/or losing a friend or family member to firearm related injuries or death)

References: CDC, 2016; Branas, et al., 2009; Turner, Finkelhor, & Henly 2018; Bieler & La Vigne, 2014; Agrawal, et al., 2018; Bingenheimer, et al., 2005; Luthar & Goldstein, 2004
Gun Violence and COVID-19

 Shootings And Gun Deaths Continue To Rise At Alarming Rate In Large U.S. Cities

TOPLINE Many large U.S. cities, including New York, Philadelphia and Chicago, have been plagued by a recent surge in shootings and subsequent fatalities, escalating the debate over gun violence, which has disproportionately impacted communities crippled by the coronavirus pandemic and ensuing recession.

Gun Violence Is Killing More Kids in the U.S. Than COVID-19. When Will We Start Treating It Like a Public Health Issue?

America’s gun violence epidemic is inextricably linked to police violence
About 2 Million Guns Were Sold in the U.S. as Virus Fears Spread

By Keith Collins and David Yaffe-Bellany  April 2, 2020

Gun Violence as an ACE

• There are multiple experiences that ought to be considered ACEs but currently are not captured by most existing screening measures. Gun violence is one of these.

• ACEs are considered stressful or traumatic events that impact the healthy development of children through adolescence and into adulthood.

• Our systematic review of the literature confirmed that gun violence exposure falls well within this definition.

References: Rajan, Branas, Myers, & Agrawal, 2019
Gun Violence as an ACE (continued)

- Our research illustrates multiple similarities between the following:
  - The nature of gun violence exposure and other ACEs
  - The impact of gun violence exposure and ACEs on a range of critical health outcomes
  - The need for interventions and resources to support individuals who have had ACES, and for individuals who have been exposed to gun violence in some form.

References: Rajan, Branas, Myers, & Agrawal, 2019
Operationalizing GV Exposure

- Youth gun violence exposure should include the following:
  - Injury from a gun, being threatened by a gun
  - Witnessing gunfire
  - Hearing gunshots
  - Knowing a friend or family member who has been shot
  - Having close friends or a sibling who carry a gun
    - We are also interested in screening for these experiences regardless of location, as we know youth GVE can – and does – occur in homes, schools, and more generally within one’s neighborhood.

References: Rajan, Branas, Myers, & Agrawal, 2019; Bieler & La Vigne, 2014; Bingenheimer, et al., 2005; Finkelhor, 2018; Wang & Maguire-Jack, 2018; Wright, et al., 2017; Garbarino, et al., 2002
Summary of Key Findings

• The key conclusions stemming from this work are threefold
  ◦ The importance of including gun violence exposure as an ACE in future screening tools.
  ◦ The importance of broadening the definition of gun violence exposure to include exposure to violence involving a gun (injury from, witnessing, hearing gunshots, and/or knowing a friend or family member who was shot).
  ◦ The importance of expanding the notion of who should conduct such screenings to increase the reach of existing screening efforts.

References: Rajan, Branas, Myers, & Agrawal, 2019
Reflections

What does stress do to the brain and body?
## Stress is Hard-Wired Into Our Biology

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<tr>
<th>Early Childhood:</th>
<th>Middle Childhood:</th>
<th>Pre-puberty &amp; Adolescence:</th>
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<tbody>
<tr>
<td>• Emotion regulation</td>
<td>• Cross-brain function</td>
<td>• Long term memory</td>
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<tr>
<td>• Verbal and spatial memory</td>
<td>• Language/math proficiency</td>
<td>• Executive function</td>
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<td>• Fear management</td>
<td>• Interpret social/visual cues</td>
<td>• Affect, attention</td>
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<td>• Emotional understanding</td>
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<td>• Regulating mental health</td>
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<td>• Ability to temper outbursts</td>
<td>• Vulnerability: PTSD, suicide, depression</td>
<td>• Movement through space</td>
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<td>• Thinking and judgment</td>
<td></td>
<td>• Reacting to peripheral details</td>
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</tbody>
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OUR BODY ON STRESS

- Difficulty concentrating
- Pupils dilate
- Blood pressure increases
- Rapid breathing
- Heart rate increases
- Adrenaline produced for fight or flight
- Blood sugar levels increase
- Nausea / stomach pain, inhibited digestion
- Digestive system slows
- Sweating
- Muscles tighten
OUR BODY RELAXED

- Increased concentrating
- Pupils constrict
- Blood pressure decreases
- Slow deep breathing
- Heart rate decreases
- Inhibition of adrenaline
- Blood sugar levels decrease
- Stomach relaxes, digestion continues
- Digestive system activates
- Normal perspiration
- Muscles relax / loosen
Promoting awareness, research and training about the effects of trauma and sources of resilience

https://traumafreenyc.cumc.columbia.edu/

Follow Trauma-Free NYC

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OUR HISTORY

• Founded in 2017, we are a Columbia University-based initiative focused on identifying and promoting trauma-informed practices and policies in New York City.

• We are a cross-school interdisciplinary group of faculty led by the Mailman School of Public Health (MSPH) with representatives from Teachers College, Psychology, Epidemiology, Developmental Psychobiology, and the DART Center for Journalism & Trauma.

• Hosted a book talk with Dr. Nadine Burke Harris in 2018- visit our website to view the one-hour talk

• In 2019 the Mailman School of Public Health launched our first ACEs Interdisciplinary Service-Learning Course that includes a field-service component with local direct service agencies in NYC

• Also launched in 2019, the Trauma-Free NYC Student Advocate Group- provides additional opportunities for student engagement and service
WHAT WE DO

(1) Serve as a scientific advisor and resource to policymakers, practitioners and the public in New York City

(2) Promote research and demonstration activities on the meaningful solutions to mitigate the harmful effects of childhood adversity

(3) Design educational, training and service-learning programs in trauma-informed practices at Columbia University
Recommended Reading


Conclusions/Next Steps

• Expand our definition of “ACE” to be more comprehensive of all youth experiences.

• ACEs are not just isolated moments.
  • Screening and subsequent efforts to intervene and support children and families must better reflect this.

• Systemic issues (poverty, racism) are also sources of trauma and must be accounted for in our screening of ACEs
  • These issues also drive whether or not a child has access to comprehensive care, support, interventions, and other resources.
  • This has critical implications for the ways in which ACEs impact children in the long-run.
Questions?

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